



RESIDENTIAL DEVELOPMENT GUIDE

Swimming Pool

TABLE OF CONTENTS

SECTION	Page
Before pursuing the building permit	1-2
Definitions	3
What special conditions exist	4-5
What documents are required	6-7
What steps do I follow at the Houston Permitting Center	8
What inspections should be expected	9
Links to Applications, Forms and Sample Drawings	10
Appendix	11

A swimming pool is defined as any structure, basin, chamber, tank or other receptacle capable of containing an artificial body of water for the purpose of swimming, diving or recreational bathing and having a depth at any point of more than 18 inches. The pool can be located at ground level, above ground or indoors.

EXCEPTIONS: Prefabricated swimming pools (an accessory to a one or two family dwelling) that are entirely above ground and do not exceed 5,000 gallons, **DO NOT** require a building permit.

BEFORE PURSUING THE BUILDING PERMIT

Before beginning any work, answering the questions below will help with the permitting process.

Is a contractor doing the work?

There are many ways to ensure that you are working with a good contractor. The City of Houston does not license building contractors, but there are several voluntary trade organizations where you can find lists of them. You can also check the Better Business Bureau (www.bbb.org) for business reviews, alerts and tips. Be sure to always check references and ensure that your contractor is properly insured.

Have you verified any deed restrictions that may be attached to your property?

Deed restrictions are written agreements that restrict or limit the use or activities that may take place on a property in a subdivision. You may purchase a copy from the County Clerk's Office, but your civic club may also have copies of your subdivision's deed restrictions. Be sure to check for any deed restrictions that exist before beginning any construction projects.

Are you aware of any Homeowners Association (HOA) restrictions?

HOAs sometimes place restrictions on the types of construction that can occur, so be sure to check with your HOA before beginning any construction projects.

Do you know where your property line begins and ends?

Prior to starting your project, make sure you know exactly where your property line begins and ends to ensure that your structure can be built in the proposed location.



HELPFUL INFORMATION AND LINKS

Flood maps:

www.gims.houstontx.gov

Deed Restrictions:

Harris County Clerk's Office
201 Caroline 3rd Floor
Houston, TX 77002
713-755-6405

Montgomery County
Clerk's Office
210 West Davis (Hwy 105)
Conroe, TX 77301
936-539-7885

Fort Bend County Clerk's Office
301 Jackson Street
Richmond, TX 77469
281-341-8652

COH Deed Restrictions Hotline
(Complaints) 832-393-6333

Harris County Appraisal District:
www.hcad.org

Montgomery Central Appraisal
District: www.mcad-tx.org

Fort Bend Central Appraisal District:
www.fbcad.org

Harris County Flood Control District
(HCFCD)
9900 Northwest Freeway
Houston, TX 77092
713-684-4000

Harris County Flood Control District
Watershed Coordinator
713-956-3074

Harris County Flood Control District
Property Management
713-684-4000

Center Point Energy Land & Right-of-
Way Department (TRT-11)
PO Box 1700
Houston, TX 77251-1700
Attention: Julie Bray 713-207-1557
Linsey Williams 713-207-6211

Southwestern Bell Telephone
Company (SBC) Right-of-Way
7602 Spring Cypress, Room #226
Spring, TX 77379
Jerry Ray 281-379-7524 or Amanda
Burus 281-379-7518

Is your property in the 100-year floodplain, floodway or conveyance zone?

Prior to starting your project, visit www.gims.houstontx.gov to determine if your property is located in the 100-year floodplain, floodway or conveyance zone. If you have flood insurance you can also contact your insurance

Will your project encroach on an easement?

You will be required to obtain an exemption from the Office of the City Engineer if your project encroaches on any portion of the street or roadway easement. You will be required to apply for Consent to Easement Encroachment through the Utility Analysis - Developer Services Section if your project encroaches on a City of Houston utility easement. If you have questions regarding this, please contact Sarun Chhin at 832-394-8986.

NOTE: *If the easement is dedicated to the Harris County Flood Control District (HCFCD), you must have your plans approved by HCFCD prior to obtaining a permit from the City. If your easement is dedicated to a utility company, you will need to obtain a release from the utility company. Contacts for utility company easement questions can be found in the left hand column on this page.*

What is the total cost of your project?

The estimated project cost will be needed in order to complete the building permit application. (See page 7 for more information)

DEFINITIONS**CONVEYANCE ZONE**

The portion of the Special Flood Hazard Area that is utilized to convey water during the occurrence of the base flood. Areas in a floodplain where natural ground is 18 inches below base flood elevation or are within 100 feet of the floodway are defined as conveyance zones.

DEED RESTRICTIONS

Written agreements that restrict or limit the use or activities that may take place on a property in a subdivision. Deed restrictions come with the property and cannot be changed or removed by subsequent owners.

EASEMENT

Areas set aside for installation and maintenance of utilities by public and private utility operators. You cannot typically build on these areas because they would limit access to the utilities.

FLOODPLAIN

Land area around a stream, river or bayou that would be affected by flooding during a "100-year event" (a rainstorm that has a 1% chance of occurring in a given year), because the water is no longer contained within the banks of the stream, river or bayou during or after that event. In the City of Houston, this area has been mapped throughout the City and can be found on the GIMS (Geographic Information & Management System) website www.gims.houstontx.gov. The floodplain is also known as "A" zones on flood insurance maps produced by FEMA. "A" zones include Zone A, Zone AE and Zone AO.

FLOODWAY

The area for storm runoff along a bayou, river, or other watercourse. In the City of Houston, this area has been mapped throughout the City and can be found on the GIMS website www.gims.houstontx.gov.

HOMEOWNER'S ASSOCIATION

An organization created by a group of property owners, or property developers which helps to oversee any shared property belonging to the homeowner group, and which usually has a legal means of enforcing agreed upon rules the homeowners must follow.

IMPERVIOUS COVER

A surface that water cannot penetrate. Examples of these surfaces are pavement, sidewalks, driveways, walkways and buildings. Examples of impervious materials are gravel, concrete and asphalt.

LOT LINE

A line dividing one lot from another, or from a street or any public place.

PROJECT COST

This includes the total cost of construction to the end user, excluding the land purchase costs and the overhead attributed to the land purchase. It also includes the value of donated goods and services.

SELF-CLOSING AND SELF-LATCHING

A gate that will automatically close and latch without human or electrical power after it has been opened.

SETBACK

A specific distance your house or any structure built on your property must be from the City's Right of Way, easements or homes/structures adjacent to your property. Setback requirements may change over time.

KEY CONTACTS**Houston Permitting Center**

Hours of Operation:
8:00 am – 5:00 pm

1002 Washington Ave.
Houston, TX 77002

Phone: 832-394-9000

Email: houston.permittingcenter@houstontx.gov

Building Code Enforcement Permits

Hours of Operation:
8:00am – 5:00pm

Contact Information:

Phone: 832-394-9494

Email: rmcaced@houstontx.gov

Taps & Meters Plan Review

Hours of Operation: 8:00 am – 3:30 pm

Contact Information:

Phone: 832-394-8971 or 832-394-8890

Email: Jacqueline.DeDiego2@houstontx.gov

or Danika.Chevalier@houstontx.gov

Floodplain Management Office

Hours of Operation:
8:00am – 4:30pm

Contact Information:

Phone: 832-394-8854

Email: fmo@houstontx.gov

Planning and Development Plan Review

Hours of Operation:
8:00am – 4:00pm

Contact Information:

Phone: 832-394-8849

Email: pd.planning@houstontx.gov

Building Code Enforcement Permits

Hours of Operation:
8:00am – 5:00pm

Contact Information:

Phone: 832-394-9494

Email: rmcaced@houstontx.gov

Storm Water Plan Review

Hours of Operation:
8:00am – 4:30pm

Contact Information:

Phone: 832-394-9124

Email: Sam.Habibi@houstontx.gov

Inspections

General Number 713-222-9922

Flood 832-394-8854

Structural 832-394-8840

Electrical 832-394-8860

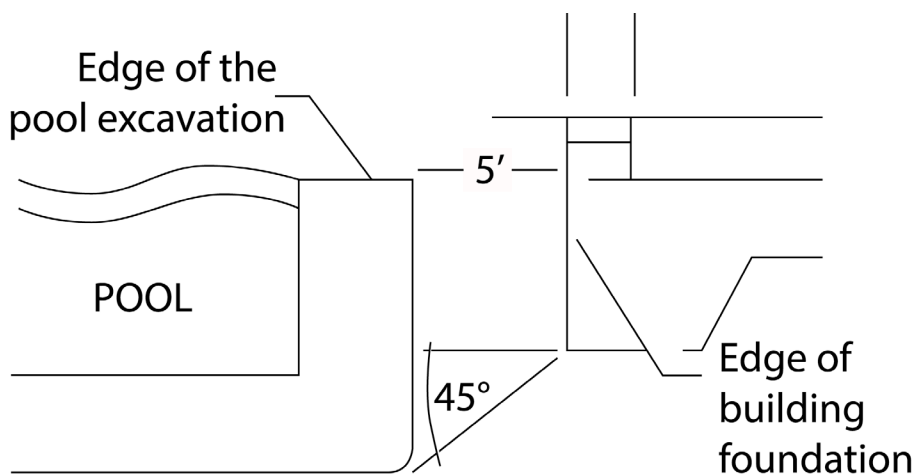
Mechanical 832-394-8850

Plumbing 832-394-8870

WHAT SPECIAL CONDITIONS EXIST?

The following items represent the special conditions that must be considered as you prepare your plans:

- All pools must be fenced per City of Houston Ordinance Code Chapter 43.
- The fence has to be over 4 feet in height (see example fence detail on page 11)
- The fence cannot have any openings or gaps larger than 4 inches (see example fence detail on page 11)
- Chapter 43, Section 43-33 of the City of Houston Code of Ordinance mandates that all gates must be “self-closing” and “self-latching”. (See example fence detail on page 11)
- The latching mechanism for the gate should be attached to the upper quarter of the gate (See example fence detail on page 11)
- When an excavation for a swimming pool is located less than 5 feet to the foundation of a building/structure, a Texas registered professional engineer must provide a sealed design criteria explaining how the soil supporting the foundation will be maintained. (The 5 feet measurement is taken from the outside edge of the foundation to the closest edge of the excavation.)



- All Pool/spa plaster colors installed must be light in color in order to see the bottom of pool for safety. (Any colors in question, Please contact John Williams @ 832-394-9377 or email john.williams@houstontx.gov)

Storm Water Plan Review

- The Storm Water Plan Review ensures compliance with the City’s storm water and drainage policies.

For Single family residential lots of 15,000 square feet in area or less

- Storm Water Plan Review is **ONLY REQUIRED** if impervious cover is greater than 75% of the total property.

For Single family residential lots over 15,000 square feet

- Storm Water plan review **IS REQUIRED**. (For more information on the Storm Review Process, please visit page 7)

In either case

- If the impervious cover is greater than 75%, a Storm Water Availability Letter must be submitted with your plans. In this case, it is recommended that you submit your plans to “One Stop Plan Review” instead of using the One Stop walk-through permitting process. The turnaround time for this review process is approximately 7 days.
- If the impervious cover is greater than 75%, storm water detention must be provided on the property.
- If the impervious cover is greater than 75% and the additional square footage being added is less than 1,000 square feet, your project may qualify for low-impact development techniques as described in Chapter 13 of the ‘Infrastructure Design Manual’ (IDM). In this case the storm water detention may be satisfied via Rain Barrels (non-engineered) or Bio Swales (engineered). Examples of these low-impact methods are available in Chapter 13 of the IDM. If you believe your project meets the low-impact development criteria contact Storm Plan Review at 832-394-8810 to discuss your project.
- To determine the impervious cover percentage you must complete the ‘Calculation of Impervious Percentage Form’. In order to complete the ‘Calculation of Impervious Percentage Form’, you will need to obtain your site dimensions.

Customer Tip:

Before you start digging, dial 811 or visit www.lonestar811.com to contact Lone Star 811 "Call Before You Dig Center." This will enable the utility company to come out and mark where the gas lines are located on your property.

DOCUMENTS REQUIRED FOR BUILDING PERMIT APPROVAL☐ **Building Permit Application Form**

This form should be completed prior to arriving at the Houston Permitting Center (HPC).

☐ **Deed Restriction Affidavit**

The deed restriction affidavit must be signed by the owner and notarized. Notaries are available free of charge at the HPC. Please do not sign the document without a notary present.

☐ **Calculation of Impervious Percentage Form (Form 1207)**

Complete this form to determine whether the lot has more than 75% of impervious cover.

☐ **Grading for Excavation and Fill Worksheet (Form 1094)**

Complete this worksheet to determine if the Residential Grading for Excavation and Fill Permit is required

☐ **Residential Grading Permits for Excavations and Fill Application (Form 1084)**

Only complete if storm review is required for this project. See the 'Grading for Excavation and Fill Worksheet'

☐ **Two Complete Sets of Plans Drawn to Scale**

- Site Plan drawn to a recognized (Architect or Engineer's) scale and showing the existing property lines, easements, building setback lines, the existing building, proposed pool and any other structures located on the site
- A plot survey that includes the address and the fence line
- Highlight the location of gates for primary pool yard enclosure
- Show pool construction company/contractor on each page of plans
- Provide name and address of pool owner on each page of plans
- Specify the color of the plaster of sides and bottom of pools and spas. Plaster color should be white or other light color to ensure an eight inch black disk placed on the floor of the deepest part is visible.
- Specify the filter type(s)
- Specify backwash through p-trap to sanitary sewer for all diatomaceous earth (DE) and high-rate sand (HRS) filters
- All skimmers must be shown on plan
- Indicate chlorination or sanitation system
- All main drains must be ASME/ANSI A112.19.8-2007 (VGB compliant). This rating must be shown on plans.
- Specify pump horsepower and/or flow rates if known
- Specify the type of backflow prevention device on pool fill line (6-inch or greater air gap, check valve on water to cutoff valve, or siphon breaking valve downstream to cutoff valve).
- Show the hose bib(s) in pool area. Specify backflow prevention for hoses in pool area.
- Provide fence and gate details (drawings) for all types of fencing to be used (wood, wrought iron, existing chain link etc.)
- Provide electrical and plumbing details
- Provide plaster color, must be light in color in order to see bottom for safety. (Any question for review please call 832-394-9377 or email john.williams@houstontx.gov)
- Please provide pool gallons on all plans for review

DETENTION VOLUME CALCULATION

Increased Impervious Cover (sq. ft.)	X	Detention Rate (.2 if < acre) (.5 if > acre)	=	Volume (cu. ft.)
---	---	---	---	---------------------

For Rain Barrels, use the following calculation to convert the volume from cubic feet to gallons:

Volume (cu. ft.)	X	7.48	=	Volume in Gallons
---------------------	---	-------------	---	-------------------------

- Please provide highlight of enclosure of property, identifying gates for safety
- Indicate if pool is heated (if heated, a pool cover is required)

☐ **Project Cost (see Definitions on page 3):**

For a building permit, the required total cost is a market valuation that includes the profit and overhead.

NOTE: If the project cost appears to be unreasonably low, a signed contract between the owner and contractor may be required.

☐ **Floodplain Plan Review Requirements**

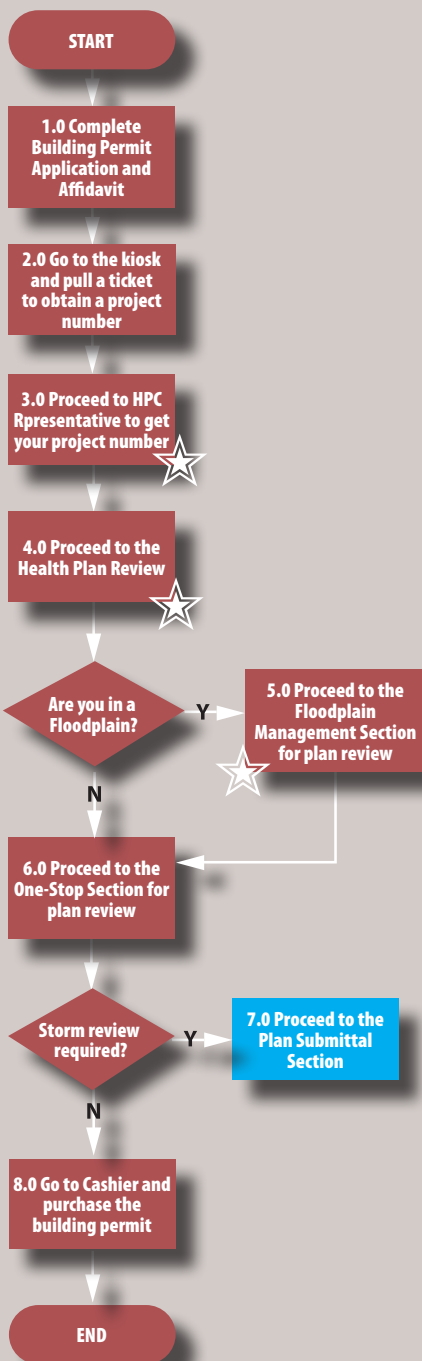
You must provide the following if your property resides in the 100-year floodplain, floodway or conveyance zone:

- A mitigation plan must be provided that demonstrates the project represents zero net fill below base flood elevation. The mitigation plan may need to be prepared by a professional engineer registered in the State of Texas and be based upon a topographic survey tied to a Harris County Reference Mark and using the NAVD 1988, 2001 adjustment datum. Check with FMO for project specific requirements.
- For sites that are in the conveyance zone, a conveyance analysis certified by a professional engineer is required that demonstrates that the proposed improvement will not reduce the conveyance capacity of the property by more than 0.5% (refer to this Conveyance zone FAQ for more information)
- For sites that are in the floodway, a “no adverse impact” letter and supporting documentation prepared by a professional engineer may be required depending on the scope of work.

☐ **Storm Plan Review Requirements**

(Only if Storm Plan is required, please see page 4 for requirements.)

- A Storm Water Availability Letter (LOSA)
- This letter is issued by the Storm Section. You must present a completed Storm Water Capacity Reservation application or the WCR Long Form for review in order to obtain the Storm Water Availability letter
- Site plan with analysis of impervious cover (including all concrete, existing and proposed)
- Show grading detail on the site plans
- Drainage plan with adequate spot elevations (or arrows indicating the direction of drainage)
- Show detention calculation, design and analysis signed by a Professional Engineer
- **NOTE:** Plans must satisfy the requirements stated in the LOSA before final approval will be granted

**CUSTOMER TIP:**

A kiosk ticket is required to access the various services at the HPC. Have the CSR 'transfer' your current ticket to the next service in the Plan Review process instead of pulling a new ticket from the kiosk.

STEPS TO FOLLOW AT THE HPC FOR THE BUILDING PERMIT

- 1.0 Complete the Building Permit Application and the Deed Restriction Affidavit prior to arriving at the HPC. The Deed Restriction Affidavit must be signed by the owner and notarized. There are free notaries available at the HPC. *Please do not sign the Affidavit without a notary present.*
- 2.0 Once at the HPC you must obtain a ticket for a project number from the kiosk station located on the first floor and wait for your number to be called.
- 3.0 HPC Customer Service Representatives (CSR) will call you on a first-come, first-serve basis to setup the project number.
- 4.0 All swimming pool plans are reviewed and approved by a Health Department plan reviewer in the Swimming Pool Plan Review Section **(Tuesday and Thursday ONLY)**.
- 5.0 The Floodplain Management Office is responsible for permitting all construction activity within the City of Houston's Special Flood Hazard Area (100-year floodplain, floodway or conveyance zone). You only have to visit the Floodplain Management Office if your project is located in the 100-year floodplain, floodway or conveyance zone. If this is not the case, please proceed to Step 6.
- 6.0 The One-Stop Plan Review section ensures plans submitted are in compliance with the current construction codes. This section will issue the building permit (which authorizes you to begin construction) after your plans have been approved by all required departments/sections. A sales order will be provided to take to the cashier to purchase the building permit.
- 7.0 Lots 15,000 sq. ft. or more or lots less than 15,000 sq. ft. with more than 75% impervious area must go through storm plan review. In these cases you must submit the plan on the third floor (no kiosk ticket required). The review process (by all departments) will take 10 - 12 days. You will be called when your plans are ready to be picked up.
- 8.0 All monetary transactions are handled by the cashier on the 1st floor. The cashier will be able to provide your building permit once all fees have been paid.

SECTION	KIOSK PATH
Building Permits	Permits -> Building Construction -> Project Number / Single Trade
Health Plan Review	Plan Review -> Health Plan Review-> Swimming Pool Plan Review
Floodplain Management Office	Plan Review -> Flood Management Plan Review -> Flood Management
One-Stop Plan Review	Plan Review -> Building Plan Review -> One Stop Plan Review

Customer Tip:

All required inspections can be scheduled online at www.pdinet.pd.houstontx.gov/cohilms/webs/Inspection_Lookup.asp or by contacting the Building Inspection Line at 713-222-9922.

The owner can only schedule building permit inspections. All other inspections must be scheduled by a licensed contractor.

WHAT INSPECTIONS SHOULD BE EXPECTED?

All required inspections are listed on the building permit job card. The following are some typical inspections that are performed for new swimming pools. **These inspections may change depending on each project's scope of work.**

Structural Inspections

- ☐ Location inspection prior to pour
- ☐ Final inspections after pool installation is complete

Electrical Inspections

- ☐ Ditch cover - Call when underground conduit is put in
- ☐ TCI - Call when temporary power is needed to check wiring
- ☐ Meter Loop Services / Final - Call after all work is completed

Plumbing Inspections

- ☐ Ground, Sewer, Water Service, Storm Drainage, Lawn Sprinklers - Call before pipes are covered
- ☐ Gas / Final - Call when work is complete

Flood Inspections (Only If Project Is In The 100-year Floodplain, Floodway Or Conveyance Zone)

- ☐ Pre-Construction
- ☐ Pre-Fill Mitigation Certificate (prior to introducing any dirt or building materials for site)
- ☐ Final Sitework (upon completion of all work outside of the building)

LINKS TO APPLICATIONS, FORMS AND SAMPLE DRAWINGS

The below documents can be accessed by clicking the hyperlinks or by visiting www.houstonpermittingcenter.org/code-enforcement/publications.html

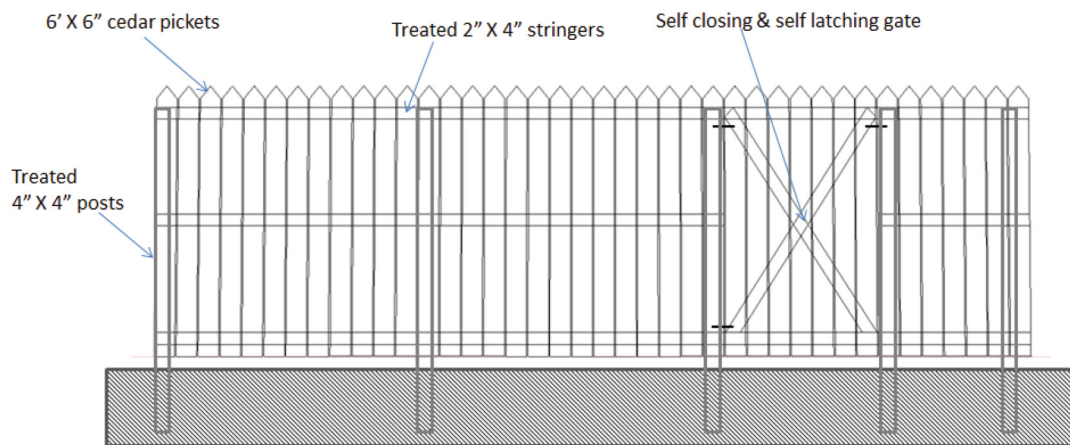
Applications and Forms

1. [Building Permit Application](#)
2. [Deed Restriction Affidavit](#)
3. [Calculation of Impervious Percentage Form \(Form 1207\)](#)
4. [Grading for Excavation and Fill Worksheet \(Form 1094\)](#)
5. [Residential Grading Permits for Excavations and Fill Applications \(Form 1084\)](#)
6. [Project Cost Estimation Worksheet](#) (Flood Requirement Only)

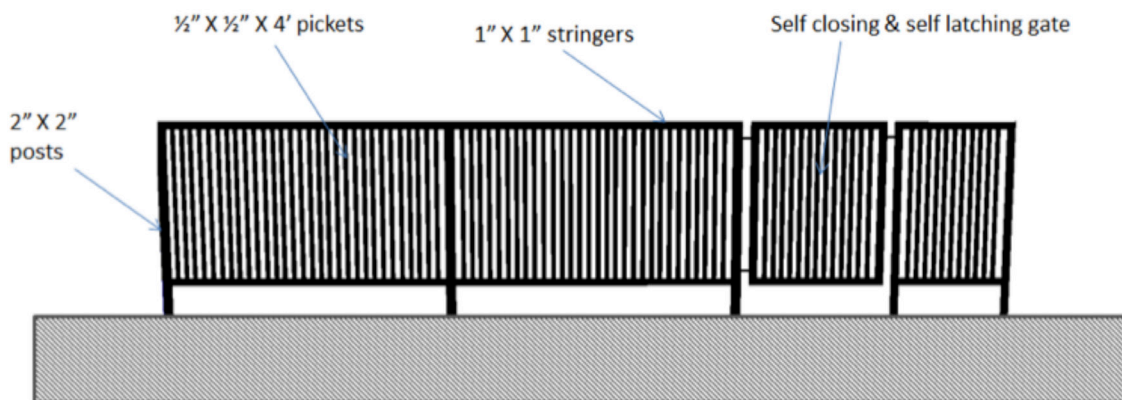
Sample Drawings and Other Useful Information

1. [Conveyance Zone FAQ](#)
2. [Infrastructure Design Manual \(IDM\)](#)
3. [GIMS - How to Check Floodplain Status](#)

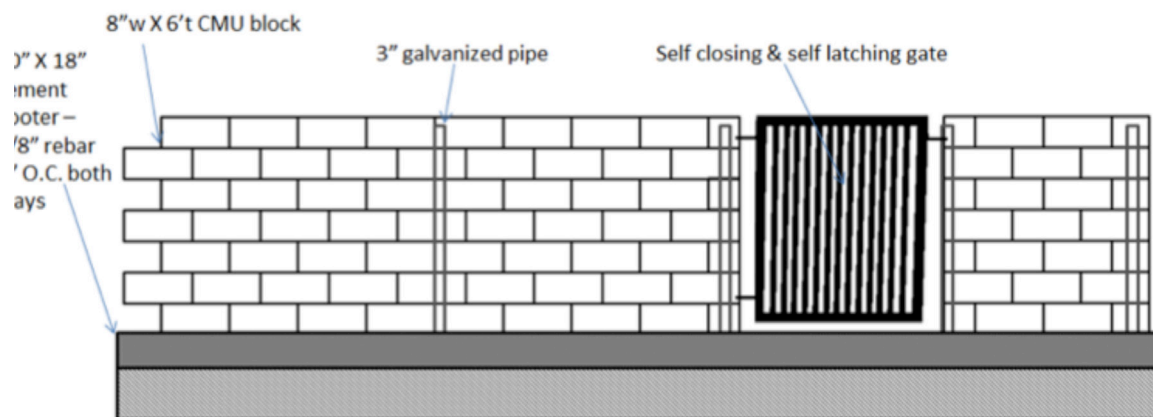
FENCING DETAIL



Wood Fence & Gate



Wrought Iron Fence & Gate



CMU Block Fence/Wall & Gate